

## **ABSTRACT**

A set top box is provided with a patch antenna to wirelessly communicate with other devices. In one embodiment, the set top box has a metallic enclosure with a non-metallic bezel covering the front of the device. A communication circuit board with an imprinted patch antenna is located in the interstitial space between the metallic enclosure and the non-metallic bezel. The communications board preferably comprises a thin (0.06 inch) FR-4 circuit board with etched copper cladding. The patch antenna preferably comprises a ground plane on one side of the circuit board, and a rectangular patch on the opposite side of the circuit board. The patch is side-fed by a microstrip feed. The dimensions of the antenna are selected to optimize the antennas performance in frequency range between 2.400 and 2.483 GHz when located in the above-described interstitial space.

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